

## A.9 GALEX GUEST INVESTIGATOR – CYCLE 1

### 1. Scope of Program

#### 1.1 Overview

This program element solicits proposals for the acquisition and analysis of new scientific data from the Galaxy Evolution Explorer (GALEX). The GALEX mission is designed to map the global history and probe the causes of star formation over the redshift range  $0 < z < 2$ , a time span that traces 80% of the life of the universe, when galaxies have evolved dramatically, and when most stars, elements, and galaxy disks formed. This solicitation is for Cycle 1 of the GALEX Guest Investigator (GI) program, to be carried out beginning on or around October 1, 2004, and lasting approximately 12 months.

Proposals submitted in response to this program may be for new observations with GALEX, or for analysis of existing GALEX data. New observations may be for standard observing proposals or for Legacy proposals; *Standard Proposals* are for small focused investigations and will generally be less than 100 orbits, while *Legacy Proposals* are for large, coherent projects of general and lasting importance to a wide astrophysical audience and are expected to require more than 100 orbits. During GI Cycle 1 approximately 2/3 of the GALEX observing time will be used by the GALEX science team to carry out the mission's primary science investigations (<http://galexgi.gsfc.nasa.gov/piscience>). The remaining observing time (~1500 orbits) during Cycle 1 will be available to the scientific community through this solicitation, for investigations that do not duplicate the GALEX science team investigations. Proposals may also be submitted to use archival GALEX data for investigations not duplicating the GALEX science team investigations (<http://galexgi.gsfc.nasa.gov/piscience>); during Cycle 1, archival investigations will be restricted to using only data made publicly available in GALEX data release 1 (DR1, <http://galexgi.gsfc.nasa.gov/targets/DR1>).

#### 1.2 The GALEX Mission

GALEX provides ultraviolet imaging in two broad bands, Far-UV (FUV, 1350-1800 Å) and Near-UV (NUV, 1800-2800 Å), and low-resolution ( $R = \lambda/\delta\lambda = 150-300$ ) grism spectroscopy. The images cover a circular field of view of  $1.25^\circ$ , at a spatial resolution of  $\sim 4$  arc sec FWHM, with sufficient sensitivity to study a wide variety of objects within and outside of our Galaxy. GALEX is a Principal Investigator (PI)-class mission, developed in collaboration between the California Institute of Technology (CIT), Pasadena, California, the Laboratoire d'Astrophysique Spatiale, Marseilles, France, the University of California at Berkeley, The Johns Hopkins University, Baltimore Maryland, and the Yonsei University, South Korea. The GALEX PI, Dr. Christopher Martin of CIT, is responsible to NASA for the mission design, development, and operations. GALEX is controlled from the GALEX Scientific Operations Center located on the CIT campus.

The GALEX prime mission will achieve its scientific objectives by performing a series of seven complementary imaging and spectroscopic surveys. The four imaging surveys (<http://galexgi.gsfc.nasa.gov/surveys>) include one intended to cover  $\sim 90\%$  of the sky at moderate sensitivity (the All-Sky Survey), two other imaging surveys covering smaller areas to increasing sensitivities, and a survey of nearby galaxies. The three spectroscopic surveys

(<http://galexgi.gsfc.nasa.gov/surveys>) are matched to subsets of the imaging surveys. Further information on the design and contents of these surveys may be found at the GALEX GI website (<http://galexgi.gsfc.nasa.gov/>). Although the surveys are designed to study galaxy evolution, the satellite and accompanying rich data sets should prove invaluable for exploring many astrophysical problems. Proposers to this Cycle 1 GI program are encouraged to take full advantage of the capabilities of GALEX (within operational constraints) to address important problems in astrophysics, for example, large scale structure, AGN populations, massive star evolution, supernova remnants, interstellar and intergalactic material, young stellar objects and their environments, planets and their satellites, or comets.

All research supported by NASA's programs must now demonstrate a relationship to NASA's strategic goals, as stated in the latest version of its Strategic Plan (follow links from the Web site <http://spacescience.nasa.gov/>). Therefore, all proposers to this program element are asked to state their perception of this relevance, particularly to the science themes "Astronomical Search for Origins" and "Structure and Evolution of the Universe" (<http://spacescience.nasa.gov/admin/pubs/strategy/2003/index.html>). This statement of relevancy should be included in the Scientific Justification section of the proposal.

## 2. Programmatic Information

### 2.1 Proposal Submission and Evaluation

#### IMPORTANT INFORMATION

As discussed in the *Summary of Solicitation* of this NRA, the Office of Space Science (OSS) is now using a single, unified set of instructions for the submission of proposals. This material is contained in the document entitled *NASA Guidebook for Proposers Responding to NASA Research Announcement – 2004* (or *NASA Guidebook for Proposers* for short) that is accessible by opening URL <http://research.hq.nasa.gov/>, and linking through the menu item "Helpful References," or may be directly accessed online at URL <http://www.hq.nasa.gov/office/procurement/nraguidebook>.

**However, owing to the need to provide electronic data bases both to NASA Headquarters for overall cognizance of its research programs, as well as to the GALEX Science Operations Center for planning of the new observations requested by the investigations to be selected through this program element, proposers are asked to electronically submit proposal materials to two separate Web sites as detailed below.**

#### 2.1.1 Submission of Proposals to the GALEX Cycle 1 GI Program

NASA will review proposals for this program in a two-stage process. In Stage 1, proposals will be evaluated with respect to their intrinsic merit and relevance to NASA's objectives. Observing proposals selected in the Stage review will be awarded observing time on GALEX and become candidates for funding subject to the Stage 2 review process. The proposed cost of the investigation will be evaluated in the second stage. Archival proposals selected will

become candidates for funding subject to the availability of proposed targets in GALEX Data Release 1 (DR1, at <http://galexgi.gsfc.nasa.gov/targets/DR1>).

In order to expedite the proposal review process and the timely selection of scientific peer review panels, investigators intending to submit proposals for participation in this program are asked to submit a Notice of Intent (NOI) to propose by the deadline to the Web address given in this NRA's *Summary of Solicitation*. Note that a NOI submission is not required but is of considerable value in helping NASA plan for an expeditious peer review of proposals.

Prospective proposers to Cycle 1 of the GALEX GI Program must adhere to the following 3-step procedure for the submission of Stage 1 proposals:

- **Electronically submit a *Cover Page/Proposal Summary/Budget Summary*** in compliance with Chapter 2.2 of the *Guidebook for Proposers* at the Web site <http://proposals.hq.nasa.gov>. Since budget information for this program element is not required until Stage 2, proposers should use a placeholder value of \$1 for the proposed cost of the investigation in the *Budget Summary* in order to allow submission. Print and retain the *Cover Page* for use in Stage 2.
- **Prepare and submit 12 printed copies of the Phase 1 proposal to the address given in the Summary of Solicitation by the Due Date** for this program element (see Table 3 in the *Summary of Solicitation* for this NRA). Proposers who are familiar with LaTeX may retrieve and prepare proposals using template Cycle 1 proposal forms (link) available on the GALEX GI Website. The PI must sign the printed *Cover Page* and attach it as the front of the original of the proposal; copies of the signed *Cover Page* must be attached to the other 11 copies of the proposal that are to be submitted.
- **Electronically submit the required minimum set of GALEX proposal and target data to the GALEX GI website** (<http://galexgi.gsfc.nasa.gov/>). The easiest way to do this is to email a filled-in proposal template (minus any included figures) to [galexprop@galexgi.gsfc.nasa.gov](mailto:galexprop@galexgi.gsfc.nasa.gov). An acknowledgment of receipt will be sent to the proposal submitter by return E-mail. Alternatively, proposers may fill in and submit their proposal/target information using the form on the GALEX GI website (<http://galexgi.gsfc.nasa.gov/targets>).

Note: All printed and electronic proposal materials must arrive at the above addresses by the Due Date for this program given in Table 3 of the *Summary of Solicitation* to this NRA in order to be included in the proposal review for this cycle of the GALEX GI program.

#### 2.1.2 Evaluation and Selection of Proposals submitted to the GALEX GI Program

Proposals will be evaluated with respect to the criteria specified in Section C.3 of the *Guidebook for Proposers* (excluding cost), where it is understood that the intrinsic merit of a proposal shall include the following factors:

- The overall scientific merit of the proposed investigation;
- The suitability of using the GALEX observatory and data products for the proposed investigation;

- The degree to which the investigation uses GALEX's unique capabilities;
- The feasibility of accomplishing the objectives of the investigation; and
- The feasibility and suitability of the proposed analysis techniques.

Legacy proposals will also be judged on the factor:

- Provisions to provide legacy data and enhanced data products to the community in a timely fashion.

Based upon the results of the above reviews, the GALEX Program Officer identified below will recommend a set of proposals to the GALEX Program Executive for selection.

## 2.2 Funding

Selected investigators at U.S. institutions, including U.S. Co-Investigators on selected non-U.S. proposals, will be eligible for funding. The selected investigators will receive a funding guideline from NASA based on the scope of the approved observing program and the available budget for the GALEX Cycle 1 GI program. It is estimated that the FY 2005 funding available for this program will be approximately \$2M and that this level of funding will support about 30-50 research investigations. A budget summary and narrative description of how the award will be used must be submitted after the receipt of the guideline (note: further instructions for this procedure will be sent to the selected investigators). An institutional signature is required when the budget is submitted. The maximum period of performance that may be proposed is for one year.

## 2.3 Supplemental Information

Further details of the proposal submission requirements and process may be found at the GALEX GI Program website (<http://galexgi.gsfc.nasa.gov/>) which includes a detailed mission description; technical information about GALEX and instrument; instrument and observer handbooks; tools for determining the feasibility of potential observations; information on the GALEX PI team science investigations; listings of observed and planned targets and of data sets available for archival proposals; sample data sets; detailed information regarding proposal submission, evaluation, selection and implementation; and instructions for completing the required proposal forms.

## 2.4 Schedule

The schedule for submission of Notice of Intent (NOI, encouraged but not required), electronic and hard copies of proposals is given in Tables 3 and 4 of the *Summary of Solicitation* of this NRA. The due date for the electronic submission of the Target lists is due on the same date as the hard copy of the proposal.

## 2.5 Contact Information:

Scientific and technical questions concerning this program element should be directed to:

Dr. Susan G. Neff  
GALEX Mission Scientist  
Laboratory for Astronomy and Solar Physics  
Code 681  
Goddard Space Flight Center  
National Aeronautics and Space Administration  
Greenbelt, MD 20771-0001  
Telephone (301) 286-5137  
Facsimile: (301) 286-1753  
E-mail: [Susan.G.Neff@nasa.gov](mailto:Susan.G.Neff@nasa.gov)

Programmatic information may be obtained from the GALEX Program Officer:

Dr. Zlatan Tsvetanov  
Astronomy and Physics Division  
Code SZ  
Office of Space Science  
National Aeronautics and Space Administration  
Washington, DC 20546-0001  
Telephone (202) 358-0810  
Facsimile: (202) 358-3096  
E-mail: [Zlatan.Tsvetanov@nasa.gov](mailto:Zlatan.Tsvetanov@nasa.gov)

Technical information may be obtained from the GALEX GI website and/or help desk:

GALEX GI Help Desk  
Laboratory for Astronomy and Solar Physics  
Code 681  
Goddard Space Flight Center  
Greenbelt, MD 20771  
USA  
Telephone (301) 286-03623  
Facsimile: (301) 286-1753  
E-mail: [GALEX.helpdesk@galexgi.gsfc.nasa.gov](mailto:GALEX.helpdesk@galexgi.gsfc.nasa.gov)

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